

Work Order ID 145050

May 02, 2016 11:16:08 AM

145050

Page 1

Item ID: D5304-1

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Crossbolt Spacer

Start Date: 5/2/2016 Start Qty: 20.00

~~20~~ 50 SH

Cust Item ID:

Required Date: 5/4/2016 Req'd Qty: 20.00

~~20~~ 50

Customer:

Reference:

Approvals: Process Plan: SH Date: 20160502 Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start *NR1*
Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D5304	A

100

0.00

100

Hardinge CNC LATHE SMALL

Hardinge

Memo

0.20

Hardinge CNC Lathe Small

1- Machine as per Folio FB

FOLIO REV: AA

DWG REV: A

DO NOT CHAMFER OUTSIDE DIA

2- Deburr

34 X 16/05/03

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

QC

Memo

0.20

Quality Control

34 X 16/05/03

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

May 02, 2016 11:16:08 AM

Page 2

[illegible]

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
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OTHER : ☐					

Work Order ID 145050

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Page 3

Item ID: D5304-1

Accept :

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Crossbolt Spacer

Start Date: 5/2/2016 Start Qty: 20.00

20

Cust Item ID:

Required Date: 5/4/2016 Req'd Qty: 20.00

20

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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150

QC6- Inspect dimensions to drawing

0.00

150

QC

Memo

0.00

Quality Control

34DAS
38

MAY 27 2016

160

0.00

160

HandFinish

Memo

0.00

Hand Finishing

WASH SPACER AS PER QSI005

3416-5-30DAS
19
9-29

170

QC5- Inspect part completeness to step on W/O

0.00

170

QC

Memo

0.40

Quality Control

3416-06-01DAS
18
9-29

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
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				Completed By			
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N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Crossbolt Spacer

Start Date: 5/2/2016 Start Qty: 20.00

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Cust Item ID:

Required Date: 5/4/2016 Req'd Qty: 20.00

20

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run

Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

Identify as per dwg & Stock Location **LG001**

0.00

190

Packaging

Memo

0.20

Packaging

STOCK IN SHUTTLE CELL
LOCATION: LG001**34****16-6-1****DAS
19
9-89**

200

QC21- Final Inspection - Work Order Release

0.00

200

QC

Memo

2.00

Quality Control

JUN 01 2016**JUN 01 2016**

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																
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Picklist Print

May 02, 2016 11:16:15 AM

Page 1

Work Order ID: 145050

145050

Parent Item: D5304-1

D5304-1

Parent Item Name: Crossbolt Spacer

Start Date: 5/2/2016

Required Date: 5/4/2016

Start Qty: 20.00

Required Qty: 20.00

Comments: IPP REV:A NEW ISSUE 15-09-24 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M6061T6T0.750W.125

Purchased

No

f

19.9300

9.115789

M6061T6T0 750W 125

6061-T6 RD Tube .750 x .125W

Location

Loc Qty

Loc Code

MAT

16

m133044

16

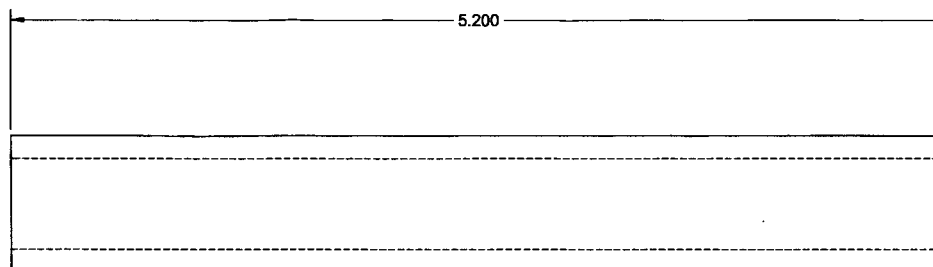
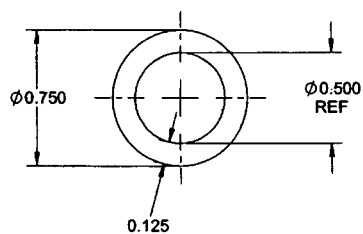
MAT015

3.93

120918

3.93

16 #



D5304-1 CROSSBOLT SPACER

20160502
SA
145050

NOTES:

- 1) MATERIAL: 6061-T4/T42 SEAMLESS ALUMINUM TUBING PER WW-T-700/6, AMS 4081, OR ASTM B210/B221/B241
REF DART SPEC M6061T4T0.750W.125
OR
6061-T6/T62-T6510/T6511 SEAMLESS TUBING PER WW-T-700/6 OR
QQ-A-200/8 OR QQ-A-225/8 OR AMS 4080 OR AMS 4082 OR AMS 4083
OR ASTM B210 OR ASTM B241. REF DART SPEC M6061T6T0.750W.125
HEAT TREAT TO T4/T42 CONDITION. MIN UTS = 30 KSI (60 HREW MIN)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.05 lbs

RELEASED
2016-02-04
ECN 16-514

APPROVED

A		NEW ISSUE		DESCRIPTION		AP	15.11.02
REV.						BY	DATE
DESIGN		AP		DART AEROSPACE USA, INC.			
DRAWN		AP		EUGENE, OR			
CHECKED		AJS		DRAWING NO.		REV. A	
MFG. APPR.		JLM		D5304		SHEET 1 OF 1	
APPROVED		WM		TITLE		SCALE	
DE APPR.		DS		CROSSBOLT SPACER		NTS	
DATE		15.11.02		COPYRIGHT © 2015 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.			



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO32238

Purchase Order Date 5/3/2016

PO Print Date 5/3/2016

Page Number 1 of 2

Order From :

VC-ATB001

Ship To : DART AEROSPACE LTD

AGGRESSIVE TUBE BENDING
9750 - 188TH STREET
SURREY, B.C. V4N 3M2
CANADA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

E-MAILED

MAY 09 2016

Contact Name

Vendor Phone

604-882-4872

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

Destination-Collect

Ship To Contact

Ship To Phone

Ship Via:

FedEx Overnight collect

Ship Acct:

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	145050	D5304-1 CROSSBOLT SPACER	5/9/2016 Yes 5/9/2016		34.00	\$1.53	\$52.01
HEAT TREAT TO T4/T42 CONDITION MIN. UTS=30 KSI (60 HREW MIN) NOTE: DETAIL C OF C REQUIRED PART ARE MADE FROM 6061-T6 MATERIAL							
Line Total:							\$52.01
2	145075	D4686-1 SPACER	5/9/2016 Yes 5/9/2016		100.00	\$1.53	\$152.99
HEAT TREAT TO T4/T42 CONDITION MIN. UTS=30 KSI (60 HREW MIN) NOTE: DETAIL C OF C REQUIRED PART ARE MADE FROM 6061-T6 MATERIAL							
Line Total:							\$152.99

Note:

5/3/2016

PYROTEK 0723742 BC LTD.

#101 2285 Queen St. Abbotsford BC Canada V2T
6J3 Phone : (604) 859-4484 Fax: (604) 859-4481
Email: pyrotek@pyrotek.com

Packing Slip

Number: 92877

Ship Date: May 25, 2016

Customer's PO #: 16-0596_1

Pyrotek's W/O #: 92791

Cert #: 92877

Aggressive Tube Bending Inc.

**9750 - 188th Street
Surrey, BC V4N 3M2**

Phone: (604) 882-4872

Ship Via: PICK UP

Heat Treat Process : Solution Heat Treat to "W" Condition / Natural Age to 6061-T4 Temper

PO Line #	Qty	Part #	Description	Reference
1	✓ 34 ea.	N/A	ALUMINUM TUBES	USED BY 16-0596/1 OP #30
2	✓ 45 ea.	N/A	ALUMINUM TUBES	
3	✓ 59 ea.	N/A	ALUMINUM TUBES	

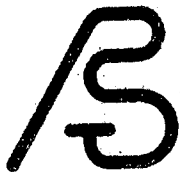
SP 16-05-27

Total: 138

Received By: _____

Date: May 25, 2016



**AGGRESSIVE TUBE BENDING INC.**

9750 188th Street
Surrey, BC V4N 3M2
Phone: 1-604-882-4872
Fax: 1-604-882-4873

PACKLIST

Packlist ID: 28336
Date: 2016-05-25
Page: 1 of 1

Shipped By:

Sold To Address	Ship To Address
DART AEROSPACE LTD 1270 ABERDEEN STREET HAWKESBURY, ON K6A 1K7 CANADA	DART AEROSPACE LTD 1270 ABERDEEN STREET HAWKESBURY, ON K6A 1K7 CANADA

CUSTOMER ID			CUSTOMER PO			PAYMENT TERMS			F.O.B.		
2883			32238			Net 30					
SALES/REP ID			SHIPPING METHOD				SHIP DATE		OUR ORDER NUMBER		
YT			FEDEX 1-800-463-3339						16-0596		
QUANTITY							CUSTOMER				
ORD	SHIP	BCK	PART ID		DESCRIPTION			PART NO.		DRAWING #	

34 ✓	ANNEAL 3/4 X .125 @ 5.200" ✓	D5304-1 ✓ B145050
45 ✓	ANNEAL 3/4 X .058 @ 5.200" ✓	D4686-1 ✓ B145075
59 ✓	ANNEAL 3/4 X .058 @ 5.200" ✓	D4686-1 B145075
1	QA/TESTING	

SHIP FEDX ACCT# 151793240 P1 OVERNIGHT

ORDER SPECIFICATIONS

8/16-05-27.

RECEIVED BY: _____

QA REQUIREMENTS: Mill Test Reports

CERTIFICATE OF CONFORMANCE

PYROTEK 0723742 B.C. LTD.

CUSTOMER P.O. # 16-0596_1

CERT: 92877. : .

101 - 2285 Queen Street, Abbotsford, B.C. V2T 6J3

TEL: (604) 859-4484 FAX: (604) 859-4481

PYROTEK W.O. #: 92791

W.O. Date: 05/20/2016

CERT DATE: May, 25 2016

CUSTOMER: **Aggressive Tube Bending Inc.**

9750 - 188th Street, Surrey, BC V4N 3M2

MATERIAL: 6061-F

ALUMINUM TUBE

0.058" - 0.125" BARE

PROCESS DESCRIPTION: *Solution Heat Treat to "W" Condition / Natural Age to 6061-T4 Temper*

QUANTITY	PART NUMBER	PARTS DESCRIPTION	REFERENCE
34 ea.	N/A	ALUMINUM TUBES	USED BY 16-0596/1 OP #30
45 ea.	N/A	ALUMINUM TUBES	
59 ea.	N/A	ALUMINUM TUBES	

BATCH #	PROCESS	TIME	TEMPERATURE	FURNACE	SPECIFICATIONS
37653	Solution Heat Treat	0:58 Minutes	985 deg. F.	6	AMS 2770 Rev N
	Quench	7 Second	71/75 deg. F.		

Natural Age

Ambient

Glycol Quench 22 % max

Air Cool Ambient

TEMPER VERIFICATION REPORT

SPECIFICATION: AMS 2658 "C"

HARDNESS: 64.0 - 69.0 HR15TW

ELECTRICAL CONDUCTIVITY:

N/A % IACS

PYROTEK Certifies that the items listed hereon have been HEAT TREATED IN ACCORDANCE with the above LISTED SPECIFICATION, have been inspected and tested and conform to all Contract or Purchase Order requirements. TEMPER IS CERTIFIED for the Items in their Present State of Condition. Documentation is on file.

Accredited
Nadcap™
HEAT TREAT

QTY. ACCEPT

34+45+59

QTY. REJECT

0


MANAGER, QUALITY ASSURANCE

May 25, 2016

DATE